

NEW LYMNÆAS FROM WISCONSIN AND MINNESOTA WITH NOTES
ON SHELLS FROM THE LATTER STATE*

BY FRANK C. BAKER

LYMNÆA (GALBA) WINNEBAGOENSIS n. sp.

Shell elongated; rather thick and solid; periostracum very light horn color; surface dull, lines of growth crowded, coarse, crossed by more or less deeply incised spiral lines; nuclear whorls $1\frac{1}{2}$, small, well rounded, dark wine or light horn colored; whorls 7, flatly rounded, the body whorl more convex; spire long, forming a very regular sharp-pointed cone, longer than the aperture; sutures impressed; aperture ovate; peristome slightly thickened within by an inconspicuous varix edged with purple; inner lip rather wide, reflected and appressed tightly to the columellar region, leaving a very narrow umbilical chink, and forming a wide callous deposit on the parietal wall; columella with a heavy, oblique plait, twisting the axis.

Length 26, width 12.2; aperture length 12, width 6 mm.
Type.

Length 22.5, width 10.4; aperture length 10, width 5 mm.
Paratype.

Length 19, width 10; aperture length 10, width 5 mm. Paratype.

Length 18, width 9.1; aperture length 9.1, width 4.2 mm.
Paratype.

Length 15.5, width 7.1; aperture length 7.2, width 3.5 mm.
Paratype.

Length 6.9, width 3.2; aperture length 4, width 1.6 mm.
Paratype.

Types No. z11826, Museum of Natural History, University of Illinois.

Type locality. Oshkosh, Lake Winnebago, Wisconsin.

Habitat. When young and immature on vegetation in protected places, like coves and bays. When adult in deeper water on gravel and sand bottom.

* Contribution from the Museum of Natural History, University of Illinois, No. 18.

This characteristic species evidently belongs to the *catascopium* group of *Lymnaeas*, having the same texture of shell as the lake forms of that species and occupying the same kind of habitat. It differs from all varieties of *catascopium* in its long, pointed spire, small aperture, and flat-sided whorls. It somewhat resembles some large individuals of *Lymnaea catascopium adamsi* Baker from the St. Clair flats near Detroit, Mich., but is much larger and has a differently shaped spire and aperture (see Mon. Lym., p. 393, pl. 42, figs. 5-8). It somewhat resembles *Lymnaea nashotahensis* Baker, a Pleistocene fossil found in Wisconsin, but the whorls of that species are more rounded with deeper sutures. *Lymnaea danielsi* Baker also approaches this species in general form, but the whorls are rounder, the aperture more elongate with a heavier plait on the columella. The aperture is also peculiarly effuse, a character not shared by *winnebagoensis*.

Winnebagoensis is an abundant mollusk in all parts of Lake Winnebago, the shore debris often being made up largely of this species. A more detailed paper on the ecology of this and other species found in this lake is being prepared.

LYMNAEA (GALBA) MINNETONKENSIS n. sp.

Shell elongated, fusiform, rather thin; periostracum light horn color; surface dull to shining, sometimes spermaceti-like, lines of growth crowded and crossed by deeply incised spiral lines; nuclear whorls $1\frac{1}{2}$, small, well rounded, light horn or dark wine colored; whorls 6-7, flatly convex, the body whorl often much flattened; spire long, pointed, forming a rather wide cone about as long as the aperture; sutures well impressed; peristome thickened within by a heavy varix edged with dark red or purple; inner lip rather wide, reflexed and tightly appressed to the columellar region leaving a small umbilical chink; a wide callous deposit is formed on the parietal wall; columella with a heavy oblique, twisted plait.

Length 27, width 13; aperture length 14, width 7 mm. Type.

Length 31, width 15.6; aperture length 16.7, width 8 mm.

Length 27, width 14.5; aperture length 14.5, width 7 mm.

Length 22.5, width 12.4; aperture length 12, width 6.1 mm.

- Sphaerium sulcatum* (Lamarck). *Physa sayii* Tappan.
Lymnaea stagnalis appressa Say *Physa niagarensis* Lea.
Lymnaea (Galba) minnetonkensis *Vulvata tricarinata* (Say).
 Baker. *Annicola limosa porata* Say.
Lymnaea (Galba) obrussa de- *Annicola lustrica* Pilsbry.
 campi Streng. *Succinea retusa* Lea.
Planorbis trivolvis Say. *Succinea avara* Say.
Planorbis campanulatus Say. *Vitrea hammonis* (Ström.).
Planorbis antrosus Conrad.
Planorbis a. unicarinatus Hald.

Banks of Mississippi River, St. Paul, Hennepin Co.

Polygyra profunda Say.

Polygyra profunda pleistocenica Baker. A specimen comparing in size and shape with the form named *pleistocenica* (see NAUTILUS, XXXIV, p. 66) occurred with normal *profunda*. It was marked by one wide band of color above the periphery.

Zonitoides arborea (Say). *Helicodiscus parallelus* (Say).

Vitrea hammonis (Ström.). *Strobilops virgo* (Pilsbry).

Pyramidula alternata (Say).

Small stream flowing through ravine on bank of Mississippi River, St. Paul.

Aplexa hypnorum (Linn.). *Lymnaea (Galba) eaperata* Say.

Physa walkeri Crandall. *Succinea ovalis* Say.

A LARGE QUADRULA HEROS SAY

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The collection of the United States National Museum contains the left valve of an unusually large and internally fine specimen of *Quadrula (Crenodonta) heros* Say. Mr. Ernest Danglade of Vevey, Indiana, formerly of the United States Bureau of Fisheries obtained the specimen from a pearl fisherman who had crushed the other valve. In transmitting the shell to the Museum Mr. Danglade sent the following note: "The shell was